

ABSTRACT OF THE DISCLOSURE

A self-configuring distributed packet switch which operates in wavelength division multiplexed (WDM) and time division multiplexed (TDM) modes is described. The switch comprises a distributed channel switching core, the core modules being respectively connected by a plurality of channels to a plurality of high-capacity packet switch edge modules. Each core module operates independently to schedule paths between edge modules, and reconfigures the paths in response to dynamic changes in data traffic loads reported by the edge modules. Reconfiguration timing between the packet switch modules and the channel switch core modules is performed to keep reconfiguration guard time minimized. The advantage is a high-capacity, load-adaptive, self-configuring switch that can be distributed to serve a large geographical area and can be scaled to hundreds of Tera bits per second to support applications that require very high bandwidth and a guaranteed quality of service.